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Forest Alert

United States
Department of
Agriculture

Forest Service

Northeastern Area
NA-FR-02-94

Hickory Mortality

Mortality of bitternut and shagbark hickory has been observed in Wisconsin since the late 1980's. This is similar to occurrences in the 1960's. The recent tree mortality has been associated with attacks by the hickory bark beetle, *Scolytus quadrispinosus* Say, and a newly discovered fungus in the genus *Ceratocystis* (tentatively *C. caryae*). The fungus can be isolated from sunken bark cankers and discolored wood associated with beetle attacks. In field and greenhouse studies done at the University of Wisconsin, the fungus was found to be highly virulent to bitternut and shagbark hickory, pecan, butternut and black walnut.

Recent reports indicate hickory mortality is apparently widespread across the eastern United States. It has not been determined if this mortality is always associated with the hickory bark beetle or with the *Ceratocystis sp.* fungus. You can help us delineate the extent of the problem by reporting any hickory mortality.

Dr. Eugene Smalley at the University of Wisconsin is interested in obtaining samples of hickories that are recently dead or declining. He is also interested in obtaining samples of insects associated with these dead and dying trees, especially bark beetles. To discuss proper sample collection and mailing contact:

Dr. Eugene Smalley
Department of Plant Pathology
University of Wisconsin-Madison
Madison, WI 53706
(608)262-1220

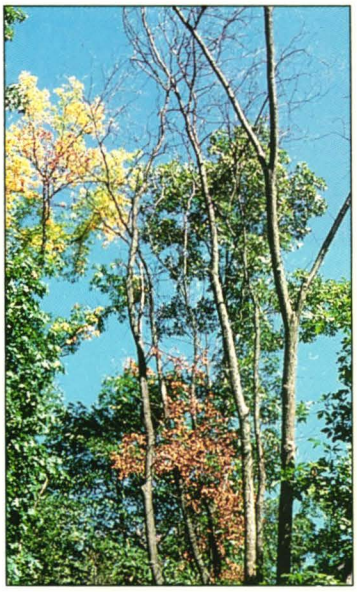

Photo 1: Varying stages of mortality in bitternut hickory. Declining (yellow leaves), recently dead (brown leaves), and trees dead for an extended time (no leaves).

Photo 2: Egg and larval galleries of the hickory bark beetle found under the bark of infested hickories. The dark discoloration is the *Ceratocystis sp.* fungus.

Photo 3: Fungal development deep into the wood on a cross-section of shagbark hickory about one year after bark beetle attack.

Photo Credits: Eugene Smalley

Please send reports of dying hickory to:

Manfred Mielke and
Steve Katovich
Forest Health Protection
St. Paul, MN